Amendments to the Claims

63. (Currently amended) A method of providing programmable copy protection of signal material transmitted via digital delivery networks, wherein [a] one or more copy protection signal prevents copying and/or subsequent viewing of a recording of the ~~recorded~~ signal material ~~while allowing viewing of the original signal material~~, comprising:

generating a copy protection command having a mode control command ~~of one or more bit~~ and programmable configuration bit patterns indicative of respective one or more copy protection signals;

transmitting the signal material and the mode control command to at least one ~~a plurality of remote~~ device[s] coupled to the networks; and

providing ~~in response to the mode control command, activating~~ the one or more copy protection signal to ~~for~~ the signal material in the at least one ~~or more remote~~ device in response to one or more corresponding configuration bit pattern selected by the mode control command, to prevent said copying and/or subsequent viewing of the recording of the ~~recorded~~ signal material ~~while allowing viewing of the original signal material~~.

64. (Currently amended) The method of claim 63 including:

transmitting the one or more copy protection signal to the at least one ~~plurality of remote~~ device[s]; and

applying the transmitted copy protection signal to the signal material in response to the one or more configuration bit pattern selected by ~~to~~ the mode control command.

65. (Currently amended) The method of claim 63 including:

storing the one or more copy protection signal in the at least one ~~or more of the remote~~ device[s]; and

recovering the one or more copy protection signal from storage and applying the recovered one or more copy protection signal to the signal material in response to the corresponding configuration bit pattern selected by the mode control command.

66. (Currently amended) The method of claim 63 wherein:

said copy protection command includes the programmable ~~a changeable~~ configuration bit patterns indicative of a plurality of ~~one or more~~ copy protection signals; and

~~said~~ wherein two or more copy protection signals are ~~is~~ applied to the signal material in response to respective [a] corresponding configuration bit patterns selected by the mode control command.

67. (Currently amended) The method of claim 63 ~~66~~, including:

storing said one or more copy protection signal in respective ~~remote~~ devices;

recovering the ~~a selected signal of said~~ one or more copy protection signals from storage in response to [a] corresponding one or more configuration bit pattern selected by the mode control command; and

applying the one or more copy protection signal to the signal material to modify the signal material such that a copy thereof is un-viewable, is viewable but uncopiable or to cause the remote devices to stop outputting the signal material.

68. (Currently amended) The method of claim 63 ~~66~~ wherein the mode control command and the configuration bit pattern each comprise one or more bit.

69. (Currently amended) The method of claim 63 ~~66~~, wherein the copy protection command includes a bit pattern for on/off/mode control and or a multiple bit pattern which defines the programmable ~~changeable~~ configuration bit pattern wherein the configuration bit patterns identify respective signals of the one or more copy protection signal.

70. (Currently amended) A system for controlling programmable copy protection of proprietary signal material transmitted via digital delivery networks, wherein a service provider enables one or more [a] copy protection signal which prevents unauthorized copying and/or subsequent viewing of a recording of the ~~recorded~~ signal material by consumers even when the ~~original~~ signal material is watchable, the system comprising:

~~a service provider center for supplying~~ a copy protection command having a mode control command of one or more bit transmitted with the signal material, and a programmable configuration bit pattern indicative of the one or more copy protection signal; and

~~a transmitter for selectively transmitting the signal material and the mode control command; and~~

a device located with each consumer for ~~providing the copy protection signal and for selectively~~ applying the one or more copy protection signal to the signal material in response to a corresponding configuration bit pattern selected by the transmitted mode control command, to prevent copying and/or subsequent viewing of the recording of the ~~recorded~~ signal material ~~while allowing watching of the original signal material~~.

71. (Currently amended) The system of claim 70 wherein the one or more copy protection signal is transmitted to the device.

72. (Currently amended) The system of claim 70 wherein the one or more copy protection signal is stored in the device.

73. (Currently amended) The system of claim 70 wherein:

the programmable ~~said copy protection command further includes a~~ configuration bit pattern ~~command which~~ determines one or more [a] programmable operating configuration corresponding to the one or more ~~of the~~ copy protection signal;

the transmitter also transmits the programmable configuration bit pattern ~~command~~; and

the device selectively applies the one or more programmable operating configuration to the signal material in response to the mode control command.

74. (Currently amended) A method of providing programmable copy protection of signal material transmitted to ~~remote~~ devices via digital delivery networks, wherein one or more [a] copy protection signal prevents copying and/or subsequent viewing of a recording of the ~~recorded~~ signal material ~~while allowing watching of the original signal material~~, comprising:

receiving the signal material and a copy protection command at one or more of the ~~remote~~ device[s], which copy protection command is indicative of the one or more copy protection signal to be applied to the signal material;

wherein the copy protection command includes a mode control command and or a programmable configuration bit pattern indicative of the one or more ~~of one or more bit for enabling the~~ copy protection signal; and

applying the one or more copy protection signal to the signal material in response to the programmable configuration bit pattern selected by ~~in response to~~ the mode control command in the one or more ~~remote~~ device, to prevent unauthorized copying and/or subsequent viewing of the recorded signal material ~~while allowing watching of the original signal material~~.

75. (Currently amended) The method of claim 74 wherein the one or more copy protection signal is received by ~~to~~ the one or more ~~remote~~ device[s].

76. (Currently amended) The method of claim 74 wherein the one or more copy protection signal is stored in the one or more ~~remote~~ device[s].

77. (Currently amended) The method of claim 74 wherein:

the one or more copy protection signal comprises a plurality of different copy protection configurations;

the ~~copy protection command includes a~~ programmable configuration bit pattern comprises a plurality of bit patterns corresponding to respective ~~for determining a selected~~ copy protection configurations to be applied to the signal material; and

the selected copy protection configuration, or configurations, is applied to the signal material in response to the programmable configuration bit pattern as enabled by the mode control command.

78. (New) The method of claim 63 wherein the one or more copy protection signal comprises a plurality of copy protection signals, and wherein each signal of the plurality of copy protection signals is identified by a corresponding configuration bit pattern which is selectable by the mode control command.

79. (New) The method of claim 78 wherein the copy protection signal include one or more of the following; vertical blanking interval (VBI) pulses On/Off, end of field back porch pulses On/Off, color stripe process On/Off, automatic gain control (AGC) pulse normal (amplitude cycling) or static mode select, H sync amplitude reduction On/Off, and V sync amplitude reduction On/Off.

80. (New) A method of providing programmable copy protection of a video signal, wherein a plurality of copy protection signals are available for application to the video signal, comprising:

providing bit patterns indicative of respective programmable copy protection configurations corresponding to the plurality of copy protection signals; and

applying one or more of the programmable copy protection configuration to the video signal in response to a selection of one or more corresponding bit pattern.

81. (New) The method of claim 80 wherein the applied programmable copy protection configurations include one or more of the following; vertical blanking interval signals On/Off, end of field back porch pulses On/Off, color stripe process On/Off, automatic gain control (AGC) pulse normal (amplitude cycling)/static mode select, H sync amplitude reduction On/Off and or V sync amplitude reduction On/Off.

82. (New) An apparatus for providing programmable copy protection of a video signal wherein a plurality of copy protection signals are available for application to the video signal, comprising:

circuitry for providing bit patterns indicative of respective programmable copy protection configurations corresponding to the plurality of copy protection signals; and

a circuit for applying one or more of the programmable copy protection configuration to the video signal in response to a selection of one or more corresponding bit pattern.

83. (New) A method of programming one or more copy protection waveforms provided to a digital delivery network that includes a transmission link, wherein the transmission link includes a microwave system, satellite system, optical system, and or phone system, comprising:

providing one or more control bits from the transmission link to at least one remote device, wherein the remote device includes an encoder circuit that provides a programmable copy protection signal and or programmable copy protection information in reception or response to the one or more control bits.

84. (New) An apparatus for programming one or more copy protection waveforms provided to a digital delivery network that includes a transmission link, wherein the transmission link includes a microwave system, satellite system, optical system, and or phone system, comprising:

a circuit for providing one or more control bits from the transmission link to at least one remote device, wherein the remote device includes an encoder circuit that provides a programmable copy protection signal and or programmable copy protection information in response to the one or more control bits.

85. (New) The apparatus of claim 84 wherein the digital delivery network includes video service providers such as a telephone signal provider and or a satellite broadcast provider, for sending compressed video signals over the digital delivery network.

86. (New) The apparatus of claim 84 further including an electronic programming guide and or flash memory.

87. (New) The apparatus of claim 84 wherein the programmable copy protection signal and or information includes providing one or more of the following signals; vertical blanking interval (VBI) pulses on/off, end of field back porch pulses on/off, horizontal sync reduction on/off, vertical sync reduction on/off, automatic gain control (AGC) pulse modification on/off, AGC pulse amplitude cycling mode and or AGC pulse static mode.

88. (New) An apparatus for processing a video signal, comprising:

a digital signal decompression circuit;

a memory circuit having an electronic programming guide for display and or software applications;

an NTSC/PAL encoder circuit for providing a video signal output and or an RF modulator circuit for providing an RF signal output;

copy protection control registers and or one or more copy protection signal generator, and including copy protection information bits; and

wherein the video signal and or RF signal is provided with a copy protection signal activated or deactivated.

89. (New) The apparatus of claim 88 including a provision for flash memory and or a provision for conditional access.

90. (New) The apparatus of claim 88 wherein:

the video signal is provided by a video service provider, a telephone company, a cable operator, and or a satellite company; and

wherein the video signal is delivered via a microwave line, a phone line, a cable coax line, an optical fiber line, and or a satellite signal.

91. (New) The apparatus of claim 88 further comprising:

a device including an integrated circuit; and

wherein the device is coupled to a microwave signal, a phone line, a cable coax line, an optical fiber line, one or more wires, and or a satellite signal, and or including an RF output.

92. (New) The apparatus of claim 88 including circuitry for programming or reconfiguring the copy protection signal, and wherein the memory circuit stores into memory one or more configuration bits.

93. (New) A method of delivering data to one or more devices that process signals, said devices being located in one or more sites, wherein each site communicates with a central system which includes a rights holder or service provider, comprising:

providing a portable media that includes data to the one or more sites or to the one or more devices;

receiving information from the one or more sites that includes identification data provided by said central system, wherein the information is received via a communication link that includes a phone line, a satellite link, an optical signal link, and or a wireless microwave link; and

wherein said central system sends a compressed data signal to the one or more sites after receiving the information from the one or more sites.

94. (New) The method of claim 93 wherein the devices include a programmable copy protection process.

95. (New) An apparatus for delivering data to one or more devices that process signals, said devices being located in one or more sites, wherein each site communicates with a central system which includes a rights holder or service provider, comprising:

a portable media memory store that provides data to the one or more sites or to the one or more said devices;

wherein the one or more remote sites provide information that includes identification data provided by said central system, wherein the information is received via a communication link that includes a phone line, a satellite link, an optical signal link, and or a wireless microwave link; and

wherein said central system sends a compressed data signal to the one or more sites after receiving the information from the one or more sites.

96. (New) The apparatus of claim 95 wherein the devices include circuitry for providing a programmable copy protection process.

97. (New) An apparatus comprising a receiver of digital signals that includes the capability of programming at least part of a video copy protection signal and or of sending data signals to a service provider, comprising:

circuitry for providing one or more mode bits and one or more configuration bits indicative of one or more copy protection signal; and

wherein the one or more mode bits enables programming of the one or more copy protection signals onto the received digital signals.

98. (New) The apparatus of claim 97 wherein:

the received digital signal is a video signal or an image signal;

wherein the receiver includes one or more of the following conditions:

the receiver includes one or more application program interface (API);

the receiver provides usage data or billing information to the service provider;

the receiver is coupled to a phone line, RF signal, microwave, a satellite transmission, and or optical link;

the receiver is a bidirectional device, capable of receiving data and or sending data;

the receiver provides control of a program signal that includes the transaction of recording not permitted, and or recording permitted at a higher transaction cost.

99. (New) The apparatus of claim 97 wherein the receiver includes a demodulator, a digital decompressor, an MPEG decoder, an audio processor, a demultiplexer, one or more software applications, an electronic programming guide, a flash memory configuration, a conditional access system, a computational processor or CPU, and or an RF modulator.

100. (New) The apparatus of claim 97 further comprising:

one or more audio output, AC-3 output, composite video output, component video output, and or RF output; and or

a display responsive to the electronic programming guide or to information from the electronic programming guide.

101. (New) The apparatus of claim 97 wherein the service provider includes a telephone company, a cable operator, a satellite broadcast company, and or a rights owner.

102. (New) The apparatus of claim 97 wherein the one or more mode bits selects one or more of the following conditions; pay to record allowed/prohibited, VBI pulses on/off, end of field back porch pulses on/off, color stripe process on/off, AGC pulse with static amplitude and

or amplitude cycling, horizontal sync reduction on selected video lines, and or vertical sync amplitude reduction on selected lines, and or including a reserved bit.

103. (New) The apparatus of claim 97 wherein the one or more configuration bits are stored in the receiver.

104. (New) An apparatus for receiving digital images from a service provider, comprising:

a device for reception of information derived via an RF signal, a phone line, a coaxial cable, an optical signal, a microwave signal, and or a satellite signal;

a digital decompressor system or circuit;

a memory and or flash memory circuit; and

wherein the apparatus includes an application program interface and or copy protection control software.

105. (New) The apparatus of claim 104 wherein the copy protection control software enables or disables recording and viewing of the digital images.

106. (New) The apparatus of claim 105 wherein the device includes one or more of the following:

circuits for receiving digital audio signals and for decompressing the digital audio signals;

an MPEG decompressor; and

a circuit for providing at least part of a video copy protection process.

107. (New) The apparatus of claim 105 wherein the copy protection control software provides for programming or enabling/disabling at least a portion of a copy protection process.

108. (New) The apparatus of claim 104 wherein the digital images comprise a video signal having horizontal and vertical sync pulses and or the device is capable of sending data to the service provider.

109. (New) The apparatus of claim 108 wherein the device provides a modification to an amplitude of the horizontal and or vertical sync pulses of the video signal.

110. (New) An apparatus for providing at least one video copy protection signal from a plurality of programmable video copy protection signals, wherein the video copy protection signals may include copy protection for analog and or digital video signals, comprising:

a configuration circuit for providing copy protection configuration bits indicative of the programmable video copy protection signals, including a color stripe signal, a reduced horizontal sync signal, a reduced vertical sync signal, an amplitude cycling of automatic gain control, (AGC) pulses, static AGC pulses, back porch pulses, vertical blanking interval pulses and or a reserved bit; and

a mode circuit for providing mode control bits for enabling one or more of the programmable video copy protection signals.

111. (New) The apparatus of claim 110 wherein the configuration circuit and or the mode circuit includes a video encoder circuit.

112. (New) The apparatus of claim 110 including one or more of the following:

an MPEG or digital decompression circuit;

an RF modulation circuit;

a software application device.

113. (New) The apparatus of claim 110 including a video encoder circuit which outputs one or more of the following signals; a component video signal, a composite video signal, and an RF signal, and or includes an audio circuit for outputting an audio signal.

114. (New) The apparatus of claim 110 including one or more of, a microprocessor device, a conditional access device, an electronic programming guide circuit, a digital to analog device, and or a computer device.

115. (New) The apparatus of claim 110 including a wireless device, a fiber optic device, a microwave frequency device, and or a wired device.

116. (New) The apparatus of claim 110 comprising, a subscription device, a control circuit device, a receiver or demodulation device, and or a transmitting device.

117. (New) The apparatus of claim 110 wherein the output thereof is coupled to a display and or a recording device.

118. (New) An apparatus for processing an analog video signal, comprising:

an input for supplying an analog video signal to an analog to digital converter and to an analog copy protection signal detector;

wherein the signal detector detects at least part of a copy protection signal; and

wherein the analog to digital converter converts the analog video signal to a digital video signal which may include an anti-copy bit;

wherein the digital video signal subsequently is supplied to a CPU and a memory having software programs, whereupon the CPU runs one or more of the software programs.

119. (New) A method of processing an analog video signal, comprising:

supplying an analog video to an analog to digital converter;

supplying the analog video signal to an analog copy protection signal detector for detecting at least part of a copy protection signal; and

converting the analog video signal to a digital video signal via the analog to digital converter to provide a digital video signal which may include an anticopy bit;

wherein the digital video signal subsequently is supplied to a CPU and a memory having software programs, whereupon the CPU runs one or more of the software programs.

120. (New) A wireless apparatus for processing images, video signals, or audio signals, wherein the apparatus may include an imbedded integrated circuit, the apparatus comprising:

circuitry for providing copy protection signals;

a digital signal decompressor system or circuit;
one or more software applications;
one or more memory system or circuit; and
a video encoder circuit;
wherein the circuits are imbedded in the apparatus or in the integrated circuit; and
wherein the copy protection circuitry may be activated or deactivated.

121. (New) The wireless apparatus of claim 120 including an MPEG decoder circuit, electronic programming guide, conditional access system, and or microprocessor.

122. (New) The wireless apparatus of claim 120 wherein the wireless device communicates in a uni-directional or bi-directional manner with a service provider, satellite company, microwave company, cable company, and or telephone company.

123. (New) The wireless apparatus of claim 120 wherein selected program material is charged on a transaction basis to the customer.

124. (New) The wireless apparatus of claim 120 wherein the copy protection circuitry may provide one or more of the following: a reserved bit, VBI pulses on/off, end of field back porch pulses on/off, color stripe process on/off, automatic gain control (AGC) pulses on/off, AGC amplitude cycling/static mode, H sync reduction on/off, and or V sync amplitude reduction on/off.

Amendments to the Drawings

The attached sheet of a drawing comprises a new Figure 4 to be added to the present application. This new Figure 4 is a portion of Figure 3 of U.S. Patent No. 5,315,448 to Ryan, wherein the Ryan patent '448 is incorporated by reference in page 2, lines 12-17 of the present application.

Attachment:

Added sheet of drawings, new Figure 4.